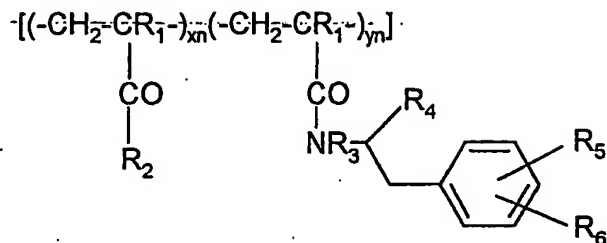


**Claims:**

1. Polyacrylamide conjugate of the general formula I,



(I)

wherein

$R_1$  denotes hydrogen or methyl,

$R_2$  denotes  $N(R_7R_8)$  or OH,

$R_3$  denotes a hydrogen,  $C_{1-6}$  alkyl or  $C_{3-6}$  cycloalkyl,

$R_4$  denotes H or  $\text{COO}^-\text{M}^+$ ,

$R_5, R_6$  denote, in each case independently of one another, a hydrogen,  $\text{SO}_3^-\text{M}^+$  or  $\text{OSO}_3^-\text{M}^+$ ;

$R_7, R_8$  denote, in each case independently of one another, hydrogen,  $C_{1-6}$  alcohol,  $C_{1-6}$  alkyl, phenyl, benzyl, phenethyl or  $N(R_7R_8)$  denotes a  $N(\text{CH}_2)_{2-6}$  ring that may also be substituted,

$n$  is 20 to 500,

$y$  is from 0.2 to 1.0,

$x$  is 1 -  $y$ .

**BEST AVAILABLE COPY**

$M^+$  is a physiologically acceptable monovalent cation.

and their diastereomers or enantiomers in the form of their acids or salts of physiologically compatible bases.

2. Polyacrylamide conjugate of claim 1, characterized in that  $R_1$  denotes hydrogen.
3. Polyacrylamide conjugate of claim 1 or 2, characterized in that  $R_2$  denotes  $N(R_7R_8)$ .
4. Polyacrylamide conjugate according to any of claims 1 to 3, characterized in that  $R_3$  denotes hydrogen.
5. Polyacrylamide conjugate according to any of claims 1 to 4, characterized in that  $R_4$  denotes  $COO^-M^+$ .
6. Polyacrylamide conjugate according to any of claims 1 to 5, characterized in that  $R_6$  is hydrogen and  $R_5$  is  $SO_3^-M^+$  or  $OSO_3^-M^+$  in the meta or para position, preferably in the para position, most preferably  $R_5$  is  $OSO_3^-M^+$  in the para position.
7. Polyacrylamide conjugate according to any of claims 1 to 5, characterized in that  $R_5$  and  $R_6$  both denote hydrogen.
8. Polyacrylamide conjugate according to any of claims 1 to 7, characterized in that  $R_7$  is hydrogen and  $R_8$  is a  $C_{1-6}$  alcohol, preferably a  $C_{1-4}$  alcohol, most preferably ethyl alcohol.
9. Polyacrylamide conjugate according to any of claims 1 to 8, characterized in that the counterion  $M^+$  is selected from the group of  $Na^+$ ,  $K^+$ ,  $NH_4^+$ ,  $Et_3NH^+$ ,  $HO(CH_2)NH_3^+$ .
10. Polyacrylamide conjugate according to any of claims 1 to 9, characterized in that  $n$  is 20 to 400, preferably 20 to 300, more preferably 20 to 100, most preferably about 20 to 80.

11. Polyacrylamide conjugate according to any of claims 1 to 10, characterized in that  $y$  is 0.2 to 0.8, preferably 0.3 to 0.6, more preferably 0.3 to 0.5, most preferably 0.35 to 0.45.
12. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for inhibiting P-selectin *in vitro*.
13. A method for protecting endothelial cells from complement-mediated cytotoxicity comprising the addition of a polyacrylamide conjugate according to any of claims 1 to 11 to said cells *in vitro*.
14. Polyacrylamide conjugate according to any of claims 1 to 11 for use as a medicament.
15. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for protecting endothelial cells from complement-mediated cytotoxicity.
16. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for the prevention and/or treatment of inflammatory reactions towards endothelial cells, preferably endothelial cells involved in arteriosclerosis or chronic heart failure.
17. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for preventing ischemia/reperfusion damage.
18. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for the treatment of cardiac or brain infarction.
19. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for preventing damage to organs during surgery-related ischemia.
20. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for preventing acute vascular rejection reactions.

**BEST AVAILABLE COPY**

21. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for preventing acute vascular rejection reactions in ABO-incompatible transplantation or xenotransplantation.
22. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of solutions for safe-keeping of life donor organs for use in transplants.
23. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for use in allogeneic and xenogeneic islet transplantation.
24. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for use in the prevention and/or treatment of HIV infection.
25. Use of a polyacrylamide conjugate according to any of claims 1 to 11 for the preparation of a medicament for use in the prevention and/or treatment of severe sepsis, acute respiratory distress syndrome (ARDS), or septic shock.